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News Release

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Why am I bad at everything? Depression can change your subjective reality

BOSTON – Typically, people have a slight bias toward thinking they have above average intelligence, athleticism, friendliness — and yes, driving ability — but researchers at VA Boston Healthcare System have shown that depressive symptoms may reduce or eliminate this bias in a study published in *Depression and Anxiety* Tuesday, April 18, 2023.

“We found that those experiencing greater depressive symptoms tended to underestimate their overall cognitive abilities and physical health,” said Joseph DeGutis, principal investigator at VA Boston Healthcare System, associate professor of psychiatry at Harvard Medical School, and co-director of the Boston Attention and Learning Lab. “Importantly, these biases resolved as depressive symptoms decreased over time.”

Previous research has studied differences between self-perception and objective performance — known as metacognitive biases — by giving people a task and asking immediately afterwards how well they think they did. Individuals with greater depressive symptoms often underrate their performance, but it has remained unclear whether depressive symptoms relate to more general negative biases, such as their broad cognitive abilities and physical health. Another open question was whether these negative biases were present before the onset of depression or if they co-occurred with depressive symptoms.

To answer these questions, the study assessed 467 Veterans on their objective cognitive abilities across a three-hour battery of cognitive tests. Additionally, their physical health was assessed using physiological measures, including blood pressure and cholesterol. Participants also filled out questionnaires about their perceived cognitive abilities and physical health. These assessments and questionnaires were then repeated two years later.

This study observed two novel findings: 1) Metacognitive biases in those with higher depressive symptoms — and to a lesser extent PTSD symptoms — were more negative across global measures of cognition and health; and 2) Negative biases changed alongside depressive and PTSD symptoms over time, often remediating with symptoms.

“One explanation is that depression makes negative memories about oneself more easily come to mind, biasing perception of cognitive abilities and health. For example, if I’m depressed, I might remember all the mistakes I made last week, which reinforces my feelings of depression and further biases my thoughts,” said Sam Agnoli, first author of the article and health science specialist at VA Boston Healthcare System. “The next step is investigating whether directly

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addressing metacognitive biases during therapy can improve depressive symptoms, which has already begun to see some support.”

The study is available at <https://www.hindawi.com/journals/da/2023/2925551/>



Sam Agnoli, a health science specialist at VA Boston Healthcare System, demonstrates a cognitive test at the Neuroscience Building on VA Boston’s Jamaica Plain campus March 28, 2023. The test was used as part of a recent study on which Agnoli was first author, which showed that depressive symptoms may increase global negative metacognitive biases in cognition and health. (VA Boston HCS photo by Julia Brau)